

Name _____ Date _____

MULTIPLYING AND DIVIDING RADICALS

Simplify

1. $\sqrt{45a^{11}} =$
2. $\sqrt{44a^{10}b^{17}} =$
3. $\sqrt[3]{48a^{13}b^9} =$
4. $\sqrt{12a^4b^7} \cdot \sqrt{6a^7b^5} =$
5. $\sqrt[3]{10a^4b^{11}} \cdot \sqrt[3]{4a^5b^9} =$
6. $6\sqrt{8x^{12}y^7} \cdot 3\sqrt{3x^4y^4} =$
7. $3\sqrt[3]{4x^9y^{11}} \cdot 4\sqrt[3]{6x^2y^5} =$
8. $\frac{\sqrt{108x^{14}y^9}}{\sqrt{9x^6y^4}} =$
9. $\frac{\sqrt[3]{162x^{15}y^{12}}}{\sqrt[3]{6x^8y^4}} =$
10. $\frac{\sqrt{48a^7b^{14}}}{\sqrt{30a^{12}b^5}} =$
11. $\frac{\sqrt[3]{56a^{11}b^5}}{\sqrt[3]{40a^8b^{17}}} =$
12. $-4(6\sqrt{2} - 3\sqrt{6}) =$
13. $\frac{3\sqrt{3} - 4\sqrt{2}}{6\sqrt{6}} =$
14. $\frac{4\sqrt{7} + 7\sqrt{3}}{6\sqrt{5}} =$